

Abstract of the Disclosure

Electrical devices comprised of nanoscopic wires are described, along with methods of their manufacture and use. The nanoscopic wires can be nanotubes, preferably single-walled carbon nanotubes. They can be arranged in crossbar arrays using chemically  
5 patterned surfaces for direction, via chemical vapor deposition. Chemical vapor deposition also can be used to form nanotubes in arrays in the presence of directing electric fields, optionally in combination with self-assembled monolayer patterns. Bistable devices are described.